

APPENDIX A – SURVEY QUESTIONNAIRE

Provided on this and the following pages are the four sides of the survey questionnaire used for the 2003 South Sound Travel Survey. With few exceptions, this survey form is essentially the same questionnaire that was used for the 1999 system-wide travel survey on the same routes.



2003 Travel Survey

Washington State Ferries wants to know WHERE, HOW, and WHY you travel via the ferry system. You can help by completing this questionnaire and by providing full address details. As thanks for your survey participation, we are offering a prize drawing of a free round-trip airline ticket. See inside for details.

Thank you for your participation!

Please tell us about the ferry ride you are taking now.

Please indicate your choice by shading in the "○". ●

Please print numbers/letters clearly in upper case:

1	2	3	A	B	C
---	---	---	---	---	---

☐ MARK HERE IF YOU HAVE ALREADY COMPLETED A QUESTIONNAIRE ON ANOTHER FERRY RIDE TODAY AND CONTINUE.

1 Where are you GOING TO now? (Your final destination today)

☐ Home ☐ Work/School ☐ Some other place

2 Please provide Question 1 address. (Your final destination today)

City

[illegible]

Zipcode

--	--	--	--	--

Name of Place/Building

[illegible]

Exact Street Address

[illegible]

OR Cross-Streets

--	--

3 Where did you **COME FROM** before boarding this ferry?

☐ Home ☐ Work/School ☐ Some other place

4 Please provide Question 3 address.

City

[illegible]

Zipcode

--	--	--	--	--

Name of Place/Building

[illegible]

Exact Street Address

[illegible]

OR Cross-Streets

										X									
--	--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--

5 What is the name of the vessel on which you are riding now?

6 At which ferry terminal will you get off this vessel?

☐ Fauntleroy ☐ Southworth ☐ Vashon ☐ Seattle ☐ Pt. Defiance ☐ Tahlequah

- 7 a. Will this vessel stop at Vashon?
☐ Yes [continue below] ☐ No [continue to question 8]

If yes, what will you do upon arrival?

- ☐ Remain on this ferry until it arrives at its next destination - [continue to question 8]
☐ Transfer to another ferry leaving from Vashon - [continue to b, below]
☐ Depart this ferry - [continue to question 8]

b. If transferring to another ferry: At which terminal will you get off that vessel?

- ☐ Fauntleroy ☐ Southworth ☐ Seattle

8 What is the purpose of the ferry ride you are taking now?

- | | | |
|---|--|--|
| <input type="radio"/> To / from regularly scheduled work or school | <input type="radio"/> To / from personal business
(lawyer, banking, haircut, etc.) | <input type="radio"/> To / from shopping |
| <input type="radio"/> To / from business-related activity
(delivery, sales appt., meeting) | <input type="radio"/> To / from social or recreational activity
(eat meal, entertainment, visiting) | <input type="radio"/> Sightseeing |
| <input type="radio"/> To / from medical appointment | | <input type="radio"/> Other purpose |

9 What type of fare was collected for this ferry ride? (check only one)

- | | |
|--|---|
| <input type="radio"/> Passenger, frequent user coupon | <input type="radio"/> Auto / driver, frequent user coupon |
| <input type="radio"/> Washington State Ferry monthly pass | <input type="radio"/> Auto / driver, full fare |
| <input type="radio"/> Passenger, full fare | <input type="radio"/> Motorcycle |
| <input type="radio"/> Free (No fare collected for trip/ fare collected in other direction) | <input type="radio"/> Recreational vehicle |
| <input type="radio"/> Passenger, youth fare | <input type="radio"/> Combined ferry / bus |
| <input type="radio"/> Passenger, senior, disabled fare | <input type="radio"/> Other |
| <input type="radio"/> Passenger with bicycle | |

10 How many minutes did you wait to board this ferry?

11 How many one-way rides (e.g., Home to Work) have you taken on a Washington State Ferry in the past 7 days, including this ride? (A round trip is TWO one-way rides, e.g., Home to Work and Work to Home)

of one-way rides

☐ First ride in past year

☐ First ride ever

12 Is this ferry ride the first half or second half of a round trip?

☐ First half [continue below a to b]

a. How will you return?

- ☐ Same ferry route
☐ Not using ferry system
☐ Different ferry route

b. When will you return?

- ☐ Today ☐ Some other day

☐ Second half [continue below c to d]

c. How did you get there?

- ☐ Same ferry route
☐ Not using ferry system
☐ Different ferry route

d. When did you go there?

- ☐ Today ☐ Some other day

Additional comments about ferry service:

13 How did you **BOARD** this ferry? (*DEPENDING ON ANSWER, FOLLOW THE CORRECT ARROWS*)

- ☐ Walked onto ferry
☐ Bicycled onto ferry

- ☐ Drove motor vehicle onto ferry
☐ Rode as vehicle passenger onto ferry

Answer these questions if you walked or biked onto ferry:

a. How did you **GET TO** the ferry terminal where you boarded this ferry?

☐ Bicycled ☐ Walked
☐ Drove vehicle ☐ Rode with someone
☐ Bus / shuttle ☐ Dropped off

Bus company: _____ For Office Use Only

b. Before boarding this ferry vessel, did you:

☐ Park a motor vehicle in ferry terminal area parking
☐ Park a motor vehicle in an off-site park-and-ride lot: (*Specify location*) _____ For Office Use Only

☐ Park a motor vehicle in any other parking lot or metered space
☐ None of the above (*Go to Question d*)

c. How much did you pay (personally) for Question b (above) parking? Per: (*check one*)

☐ hour ☐ day \$
☐ month ☐ year

d. How will you reach your **FINAL** destination after you get off this ferry?

☐ Bicycle ☐ Walk
☐ Drive vehicle ☐ Ride with someone
☐ Bus / shuttle ☐ Picked up

Bus company: _____ For Office Use Only

e. After getting off this ferry vessel, will you:

☐ Retrieve a motor vehicle parked in ferry terminal area parking
☐ Retrieve a motor vehicle parked in an off-site park-and-ride lot (*Specify Location*): _____ For Office Use Only

☐ Retrieve a motor vehicle parked in any other parking lot or metered space
☐ None of the above (*Go to Question 14*)

f. How much did you pay (personally) for Question e (above) parking? Per: (*check one*)

☐ hour ☐ day \$
☐ month ☐ year

Go to Question 14 on back page

Answer these questions if you used a motor vehicle to get on ferry:

g. Which of the following best describes the vehicle in which you boarded this ferry?

☐ Auto, SUV, minivan, or pick-up
☐ Motorcycle
☐ Camper or RV
☐ Truck (commercial, panel, tractor / trailer)
☐ Vanpool program vehicle
☐ Public transit bus
☐ Other bus

For Office Use Only

h. Counting yourself, how many people were in the vehicle? (*ignore if by bus*)

i. Did your vehicle receive priority loading as a registered ferry car/vanpool, on a bus, or as a special purpose/emergency trip?

☐ Yes ☐ No

j. *If Vehicle Passenger:* Do you live in the same household as the driver? ☐ Yes ☐ No

Go to Question 14 on back page

Register to Win A FREE Round-Trip Airline Ticket

As thanks for participating in our survey, we are offering a prize drawing of a round-trip airline ticket to anywhere in the continental United States. Fill out your name and address on the back page. A public drawing will be held and the winner will be contacted by mail and telephone before November 30, 2003.

Return this form to the survey attendant, to a return box on the ferry, or by mail. Postage has been pre-paid for mail returns.

For Office Use Only For Office Use Only

Route Status

14: How many motor vehicles in working condition are available for use by your household?

15: Including yourself, how many people live in your household?

16: How many licensed drivers?

17: How old are you?

18: Are you ... ☐ Male ☐ Female

19: Are you ... ☐ Employed ☐ Student
Mark all that apply ☐ Military Personnel ☐ None

20: Are you eligible for transportation services covered by the Americans with Disabilities Act?
☐ Yes ☐ No

Register to Win Here!

Last Name

Area Code Home Phone —

Home Address

Apt. No.

City

State/Province Zipcode

If returning by mail, please close with tape



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 5478 AUSTIN TX

POSTAGE WILL BE PAID BY ADDRESSEE

NUSTATS
3006 BEE CAVES RD STE A-300
AUSTIN TX 78746-9907



APPENDIX B — SURVEY DATABASE DOCUMENTATION

SURVEY ADMINISTRATION AND CODING

This section recaps some of the information on the sampling plan, administration, and coding of the WSF travel survey, which will help the data user understand how the data were collected and analyzed. Readers seeking additional information regarding these topics are referred to Chapter 2 of this report as well as the *WSF South Sound Ferry Routes Travel Survey: Technical Report of Methods* dated February 2004 and prepared by NuStats for Washington State Ferries as part of this study.

Survey Periods and Sampling Plan

The survey sampling plan called for administering a travel survey to a sample of weekday ferry users on five South Sound routes during the month of October, 2003. Ordinarily, May is an ideal month for surveying, both as the month most representative of annual average monthly ridership and for comparability to previous May surveys. In this case, a scheduled need for the survey information precluded a May survey date, and October was selected as both meeting the schedule and providing ridership levels close to the monthly annual averages.

The 2003 WSF Travel Survey was administered as planned over two days: Tuesday, October 14 for Point Defiance-Tahlequah and Wednesday, October 15 for the remaining south sound routes. A specific sampling plan was developed to obtain travel information from users during the weekday PM peak period as well as the remaining non-peak PM hours of the day (PM non-peak period). For the PM peak period, survey questionnaires were offered to all persons age 12 or older on every vessel sailing departing between 3 and 7 PM.⁶ PM non-peak survey period riders were surveyed on the same days as the PM peak period survey from a sample of at least 50% of the vessel sailings that occurred during the non-peak PM hours. When appropriately expanded, the two weekday survey periods combined represent the travel patterns for the PM half day ridership.

Usable Survey Records

In keeping with the previous 1999 system-wide survey, survey records deemed usable for tabulation and analysis were divided into two categories: *general usable* and *trip table usable*. A general usable record is defined as survey data for one respondent that is judged complete and valid for analysis purposes. To meet the general usable criteria, a survey record must include:

⁶ Age determination was somewhat at the discretion of the survey workers; the cutoff age used in 1999 was 15 years. A few exceptions to the PM peak period definition were made to include vessel sailings that were within the 3-7 PM window in 1999 but had been subsequently rescheduled to be just outside this period.

- Indication of the trip purpose;
- Indication (or observation) of the boarding method as in-vehicle or walk-on, and if the latter, further indication of the access mode to the departure ferry terminal and the egress mode from the arrival ferry terminal; *and*
- Geocodable address information for the respondent's trip origin and destination that are either:
 - Sufficiently dissimilar in geography to be consistent with a one-way trip on the ferry crossing surveyed; *or*
 - Geographically similar but with a reported trip purpose of sightseeing, indicating that the respondent made a continuous round-trip, beginning and ending at the same ferry terminal.

Because the survey questionnaire was designed to gather data about a one-way trip, it was necessary to exclude those records for the small percentage of respondents who erroneously provided information about a round-trip from the general usable category. In general, such round-trips have a high likelihood of beginning and ending at the same location, making it impossible to ascertain the destination and nature of the one-way trip of interest. One exception was made for respondents who indicated that they were making a continuous round-trip with the sole purpose of "sightseeing", effectively boarding and subsequently alighting the vessel at the same ferry terminal. For these cases, the ferry component of a respondent's one-way trip and round-trip are indistinguishable.

The set of trip table usable records further restricts the general usable survey records by eliminating the above round-trip exception concerning those respondents making a continuous "sightseeing" purpose round-trip. The distinction between these two sets of usable records amounted to only nine respondents.

Additional information about survey response rates can be found in Table 2-1 in Chapter 2.

DATABASE VARIABLE DOCUMENTATION

After initial database coding of the survey questionnaire responses, a series of quality control measures were undertaken to minimize response inaccuracies and address potential coding errors. Throughout this process, new variables were added to the database to provide added detail to better analyze the data, and also to correct for respondent inaccuracies/problems in questionnaire completion. Other variables were created to identify, segment, or verify information such as usable survey records, direction of travel, and origin and destination information. This process mirrored that of the 1999 survey, resulting in a database of essentially the same structure.

Using the WSF Travel Survey Databases

A single database file is provided for the WSF 2003 South Sound Travel Survey covering both the PM peak and PM non-peak periods. The database was created and analyzed using SPSS for Windows, a software package designed for statistical data analysis. Tabulations

were created in both SPSS and Microsoft Excel, and portions of the databases were exported to ArcView for Windows for geographical analysis. The databases are available distribution in both SPSS (*.SAV) and Excel (*.XLS) formats.

The database contains direct responses coded from each individual questionnaire, as well as data fields created used to aggregate data responses into category format, or otherwise combine the raw survey data to make it more useful for analysis purposes. Key variables for use in filtering the database to obtain the desired respondent information include: SVPERIOD, USABLE, TT_USE, ROUTE, DIR, BOARD, and XFACTOR. A full list of database variables and their defined values follows.

- The **SVPERIOD** variable is used to sort respondents into “weekday PM peak,” and “weekday PM non-peak,” survey time periods within the single weekday database. Both databases contain all three survey period designations (PM peak, PM non-peak and Sunday) for consistency. However, not all data categories are present in each database, because the original, comprehensive database was split into weekday and Sunday for ease of use.
- The **O_D FLAG** variable is used to evaluate the degree of accuracy in respondent reporting of trip origin and destination information and is used to filter out responses with trip origins and destinations that are incomplete, inaccurate or geographically too similar. Use of this variable is key to applying the criteria for identifying *general usable* and *trip table usable* records. In general, most data analysis can be undertaken filtering on the **USABLE** variable defined below, unless the data user will be analyzing special cases or applying the information in a travel demand forecasting model.
- The **USABLE** variable corresponds to the *general usable* definition above, and is used to identify those individual survey records that meet certain completeness criteria and are suitable for most analysis and tabulation purposes. To meet the *general usable* criteria “usable” record, the survey record must have completed responses to four critical parts for respondents boarding in a vehicle, and six critical parts for respondents boarding as walk-ons or pedestrians. In-vehicle boarders were required to have answered the trip purpose and boarding method questions, and have provided geocodable address information for their trip origin and destination. Walk-on passengers were required to report their trip purpose, boarding method, mode of access and egress to and from the ferry terminals, and have provided geocodable origin and destination information.
- The **TT_USE** variable further limits the *general usable* records to the category of *trip table usable* by filtering out those survey records that have a geographically similar trip origin and destination but had still met the *general usable* criteria because the respondent’s reported trip purpose was sightseeing, indicative of a continuous round-trip beginning and ending at the same ferry terminal.
- The **XFACTOR** variable is used to correctly expand the survey responses to the appropriate actual ridership values observed for the designated weekday survey period (PM peak or PM non-peak). In order to analyze the database and obtain the correct proportion of responses by boarding mode and direction of travel, the expansion factor variable must be applied to correctly weight tabulated results. To correctly

expand/weight the survey records in SPSS, the XFACTOR variable must be applied to the records being analyzed using the “weight cases” operator under the “Data” heading of the SPSS command menu. To correctly expand the survey records in Excel, the XFACTOR variable must be applied as a multiplicative operator while using the pivot table tabulation function. The Sunday database includes fields for the expansion factor variables, but these variables do not contain data, as complete survey period ridership data by mode and direction were not available for developing expansion targets. Therefore, Sunday data cannot be expanded and analysis results should be viewed as representative of travel patterns and distributions of Sunday survey respondents, rather than for survey period ridership as a whole. The main cause of sample bias that could result from using unexpanded Sunday data would be in tabulating results that might vary by boarding mode, since in-vehicle riders, especially vehicle passengers, were less likely to fill out the survey (lower response rate) and are thus underrepresented in the survey results.

Other more generalized variables used to filter the database include: ROUTE, DIR, and BOARD.

- The **ROUTE** (or **ROUTE_NUM**) variables are used to sort responses by specific ferry routes.
- The **DIR** (or **DIR_NUM**) variables are used to filter responses based on the (vessel) direction of travel.
- The **BOARD** (or **AGR_BRD**) variables are used to filter responses based on respondent boarding method.

Variable Names and Definitions

A list of all variables included in the database are presented below.

SERNO = Questionnaire Serial Number

This variable provides a unique identifier for each survey response.

CHECK = Completed Questionnaire on Other Ferry Ride

Provides a Yes or No response for completion of a questionnaire on an earlier ferry ride.

SVPERIOD = Survey Period Flag

Variable used to delineate between Weekday PM Peak, Weekday PM Non-Peak, and Sunday sailing times. Weekday “peak” sailing times are designated from 3 to 7pm and weekday non-peak sailing times are roughly from 12pm to final sailing, excluding the PM Peak. Coding is as follows:

- 1) Weekday PM Peak
- 2) Weekday PM Non-Peak

SAILTIME = Vessel Run Start Time

Records the scheduled sailing time of the surveyed vessel.

ROUTE = Route

Listing of ferry routes, with the following two letter origin and destination notations are:

Route Code	Route Name
PD-TA	PT. DEFIANCE—TAHLEQUAH
SO-VA	SOUTHWORTH—VASHON
FA-VA	FAUNTLEROY—VASHON
FA-SO	FAUNTLEROY—SOUTHWORTH
SE-SO	SEATTLE—SOUTHWORTH VIA VASHON
SE-VA	SEATTLE—VASHON (PASSENGER-ONLY)

DIR = Direction

Direction surveyed ferry is traveling. Responses are as follows:

East

West

LEG = Route Leg

This variable is used as a check for the triangle route and for the modeled “Seattle-Southworth” route to indicate on which route (Seattle-Vashon or Southworth-Vashon) the original record came from:

Route Leg Code	Route Leg Terminals
PD-TA	Pt. Defiance - Tahlequah
SO-VA	Southworth - Vashon
FA-VA	Fauntleroy - Vashon
FA-SO	Fauntleroy - Southworth
SE-VA	Seattle - Vashon

BOARD = Boarding Method (Question 13)

Respondents were asked to report how they boarded the ferry. Available responses are as follows:

- 1) Walked
- 2) Bicycled
- 3) Driver of Vehicle
- 4) Passenger in Vehicle
- 9) No Answer

AGR_BRD = Aggregate Boarding Method

This variable combines the walk-on and bike-on passengers into a single group and combines the vehicle drivers and vehicle passengers into a single group.

- 1) Walk-Board
- 2) Vehicle Board
- 9) No Answer

RFACTOR = Response Factor

Calculated value based on the number of completed surveys per surveyed vessel divided by the total number of passengers who boarded the ferry (per mode: driver, passenger, walk/bike).

BFACTOR = Boarding Factor

Calculated value based on the number of surveyed ferries divided by the total number of ferry sailings during the time period in question. Generally, all PM Peak ferry sailings were surveyed, so the boarding factor for PM Peak sailings will most always be one. The boarding factor is typically more important for Non-Peak sailings.

XFACTOR = Expansion Factor

Calculated value of the response factor multiplied by the boarding factor, used to expand results to account for the entire population.

O_D_FLAG = Origin/Destination Flag

Variable provides information on the level of geo-coding accuracy of origin/destination data for use in data tabulation and mapping. Coded responses are as follows:

- 1) Good Origin & Destination
- 2) Origin & Destination too similar, but trip purpose of 7 (sight-seeing)
- 3) Good Origin, but Incomplete Destination Info
- 4) Good Destination, but Incomplete Origin Info
- 5) Incomplete Origin & Destination
- 6) Origin & Destination Too Similar

USABLE = Usable Flag (Complete)

Variable provides information on each survey's completeness and the accuracy of the listed origin and destination. In order for a survey to be complete specific questions must have been answered appropriately and the geo-coding process must have yielded an O_D Flag of 1 or 2 to be considered valid. Coded responses are as follows:

- 0) Not Usable (Invalid)
- 1) Usable (Valid Complete)

TT_USE = Trip Table Usable

Variable provides information on the degree of accuracy for the listed origin and destination as well as completeness. In order for a survey to be considered "trip-table" usable the geo-coding must have yielded an O_D Flag of 1 and specific questions must have been answered appropriately. Trip Table Usable records are a subset of Usable records and are coded as follows:

- 0) Not Usable
- 1) Trip Table Usable (O_D Flag = 1)

DIR_NUM = Numeric Direction

Numeric listing of east or west direction.

- 1) East
- 2) West

ROUTENUM = Numeric Route

Numeric listing of ferry routes, with the following 2 letter origin and destination notations (see ROUTENUM for route names):

PD-TA = 1
SO-VA = 4
FA-VA = 5
FA-SO = 7
SE-VA = 43
SE-SO = 47

VEH_TYPE = Vehicle Type (Question 13g)

Of the respondents who reported they had either drove or had rode with someone to board the ferry vessel, they were asked to report the kind of vehicle they were either driving or riding in. Available responses were as follows:

- 1) Auto, SUV, Minivan, or Pick-up
- 2) Motorcycle
- 3) Camper or RV
- 4) Truck
- 5) Vanpool Program Vehicle
- 6) Public Transit Bus
- 7) Other Bus
- 9) No Answer/Refused/Don't Know

DESTTYPE = Destination Type (Question 1)

Provides coded destination types in 3 categories:

- 1) Home
- 2) Work/School
- 3) Some other place
- 9) A response of 9 was coded if the respondent did not select one of the three categories.

DESTTERM = Destination Terminal

Provides information to accurately assess and check boarding and alighting counts performed by surveyors. Responses are coded as follows:

- 1) Fauntleroy
- 2) Southworth
- 3) Vashon
- 4) Seattle
- 19) Pt. Defiance
- 20) Tahlequah
- 99) Not able to determine (none in database)

DEST_TAZ = Traffic Analysis Zone (TAZ) for Destination Location

Provides a coded TAZ, which is used for origin/destination mapping purposes.

DESTDIST = Created Destination District

Provides a coded district for mapping origin/destination locations and allows for corridor-based analysis.

ORIGTYPE = Origin Type (Question 3)

Provides coded origin types in 3 categories:

- 1) Home
- 2) Work/School
- 3) Some other place
- 9) A response of 9 was coded if the respondent did not select one of the three categories.

ORIGTERM = Terminal where Questionnaire was Distributed

Provides information to accurately assess and check boarding and alighting counts performed by surveyors. Responses are coded as follows:

- 1) Fauntleroy
- 2) Southworth
- 3) Vashon
- 4) Seattle
- 19) Pt. Defiance
- 20) Tahlequah
- 99) Not able to determine (none in database)

ORIG_TAZ = Traffic Analysis Zone (TAZ) for Origin Location

Provides a coded TAZ, used as a quality control measure and for origin/destination mapping purposes.

ORIGDIST = Created Origin District

Provides a coded district for mapping origin/destination locations and allows for corridor-based analysis.

OFF_FERR = Ferry Terminal Where Exiting Vessel (Question 6)

Respondents were asked "At which ferry terminal will you get off this vessel?"

Respondents were provided the following responses choices:

- 1) Fauntleroy
- 2) Southworth
- 3) Vashon
- 4) Seattle
- 19) Pt. Defiance
- 20) Tahlequah

VES_STOP = Vessel Stop at Vashon (Question 7a)

Respondents were asked “Will this vessel stop at Vashon?” Respondents were provided with the following response choices:

- 1) Yes
- 2) No
- 9) No Answer

This question underlying this data item was intended to identify people making a transfer between the Southworth-Vashon and the Seattle-Vashon ferries at the north Vashon terminal. Unfortunately, this question was somewhat ambiguous to many respondents as “Vashon” meant “Vashon Island” to many people, rather than the intended meaning of “Vashon Ferry Terminal.” As a result, the corrections were made to the following database variable responses: VES_STOP, VES-STOA, XFERTERM and occasionally to OFF_FERR when it was clear, based on origin and destination responses, that the respondent was confused by the question.

VES_STOA = Action upon Arrival at Vashon (Question 7a)

Respondents were asked “If vessel stops at Vashon, what will you do upon arrival?” Respondents were provided with the following response choices:

- 1) Remain on this ferry until it arrives at its next destination
- 2) Transfer to another ferry leaving from Vashon
- 3) Depart this ferry
- 9) No Answer

XFERTERM = If Transferring, Final Destination Terminal (Question 7b)⁷

Respondents were asked “If transferring to another ferry: at which terminal will you get off that vessel?” Responses for this question are as follows:

- 2) Southworth
- 4) Seattle
- 99) No Answer

TRANSFER = Created Variable for data manipulation

This variable was created from the VES_STOA responses, in order to easily separate respondents who were transferring. Created response categories are as follows:

- 1) Yes
- 2) No

⁷ A response of Fauntleroy was inadvertently included on the survey form. Survey records noting Fauntleroy were reviewed and the responses modified to appropriately reflect riders’ travel pattern based on other responses like origin and destination, etc.

TRIPPURP = Trip Purpose (Question 8)

Respondents were asked to report for what purpose they are taking the surveyed ferry trip. Allowed responses for this question are as follows:

- 1) To/from regularly scheduled work or school
- 2) To/from business-related activity
- 3) To/from medical appointment
- 4) To/from personal business
- 5) To/from social or recreational activity
- 6) To/from shopping
- 7) To/from sight-seeing
- 8) Other purpose
- 9) No Answer

AGTRPPRP = Aggregated Trip Purpose

This variable was created from the allowed trip purpose categories to form grouped responses that are more conducive to data analysis and display. Created response categories are as follows:

- 1) Work/School/Business Related
- 2) Medical Appt./Personal Business/Other
- 3) Social/Recreational/Shopping/Sight-seeing
- 4) No Answer

RTRIPSEG = Trip Segment (Question 12)

This variable reports whether the respondent is going to a destination or returning from a destination and what part of a “round-trip” this specific ferry trip pertains to. Responses to this question are as follows:

- 1) First half
- 2) Second half
- 9) No Answer

RT2_MODE = First Half How Return (Question 12)

This variable reports the respondents answer to the question of how they will return if this is the 1st half of their trip (presumably round-trip). Responses to this question are as follows:

- 1) Same ferry route
- 2) Not using ferry system
- 3) Different ferry route
- 9) No Answer

RT2_DAY = First Half When Return (Question 12)

This variable reports the respondents answer to the question of when they will return if this is the 1st half of their trip (presumably round-trip). Responses to this question are as follows:

- 1) Today
- 2) Some other day
- 9) No Answer

RT1_MODE = Second Half How Get There (Question 12)

This variable reports the respondents answer to the question of how they got to where they were going if this is the 2nd half of their trip (presumably round-trip). Responses to this question are as follows:

- 1) Same ferry route
- 2) Not using ferry system
- 3) Different ferry route
- 9) No Answer

RT1_DAY = Second Half When Get There (Question 12)

This variable reports the respondents answer to the question of when they got to their previous destination if this is the 2nd half of their trip (presumably round-trip). Responses to this question are as follows:

- 1) Today
- 2) Some other day
- 9) No Answer

TICKTYPE = Type of Ticket Used to Board Ferry (Question 9)

Respondents were asked to report the type of ticket they used to board the surveyed vessel. Coded responses are as follows:

- 1) Free
- 2) Combined Ferry/Bus
- 3) Motorcycle
- 4) Auto/Driver, full fare
- 5) Auto/Driver, frequent user coupon
- 6) Passenger with bicycle
- 7) Passenger, full fare
- 8) Passenger, senior discount
- 9) Passenger, half fare discount
- 10) Passenger, frequent user coupon
- 11) Recreational Vehicle
- 12) Truck longer than 20 feet
- 13) Employer-subsidized 1 month pass
- 14) Other
- 99) No Answer

AGR_TICK = Aggregate Ticket Type

This variable was created from the allowed ticket type categories to form groups responses that are more conducive to data analysis and display. Created responses are as follows:

- 1) Passenger, Full Fare
- 2) Passenger, Frequent User Coupon
- 3) Passenger, Discounted Fare
- 4) Ferry/Bus or Other Monthly Pass
- 5) Passenger Fare Not Required, Other, or No Answer
- 6) Auto/Driver, Full Fare
- 7) Auto/Driver, Frequent User Coupon
- 8) Oversize Vehicle
- 9) Motorcycle

WAITTIME = Wait Time (Question 10)

Respondents were asked to report the amount of time they waited to board the surveyed vessel. In most cases this was the respondents preferred vessel. In instances where no wait-time was recorded a value of 999 was used.

WAIT_CAT = Categorized Wait Time

This variable was created from the reported wait times to form grouped responses that are more conducive to data analysis and display. Created response categories are as follows:

- 1) 0 – 10 minutes
- 2) 11 – 30 minutes
- 3) 31 – 60 minutes
- 4) 61 – 90 minutes
- 5) >90 minutes
- 9) No Answer

TRIPFREQ = Ridership Frequency (Question 11)

Respondents were asked to report the number of ONE-WAY rides they had taken by ferry in the past 7 days. Respondents were provided with a box to input their response and were also allowed the following coded responses:

Responses varied from 1 ride to 44 rides.

- 77) First Ride in Past Year
- 88) First Ride Ever
- 99) No Answer

FREQ_CAT = Categorized Ridership Frequency

This variable was created from the reported frequency responses form grouped responses that are more conducive to data analysis and display. Created response categories are as follows:

- 1) 1st Ride in Past 7 Days (includes 1st ride in past year and 1st ride ever)
- 2) 2 – 5 Rides in Past 7 days
- 3) 6 – 9 Rides in Past 7 days
- 4) 10 or More rides in Past 7 days
- 9) No Answer

ACC_MODE = Access Mode (Question 13a)

Walk-board respondents were asked to report how they arrived at the ferry/dock area. Available responses are as follows:

- 1) Bicycled
- 2) Walked
- 3) Drove Vehicle
- 4) Rode with Someone
- 5) Bus/Shuttle
- 6) Dropped Off
- 9) No Answer/Refused

ACC_BUS = Access Bus Company (Question 13a)

Respondents were asked which transit agency they used to access the ferry/dock area, if they arrived via a bus or shuttle. Coded responses are as follows:

- 1) Kitsap Transit
- 2) King Co. Metro Transit
- 5) Pierce Transit
- 8) Other
- 9) No Answer

ACC_PARK – Access Parking (Question 13b)

Respondents were asked to report where they parked their vehicle, if they drove to the ferry terminal, but walked or biked onto the ferry. The category of “Other Paid Parking” was created to account for those persons who chose either “none of the above” or did not provide an answer, but did however, provide the amount unit and the cost paid for parking. For this pattern of response, it was assumed that the respondent parked, but the parking space/location did not fit into the provided categories. Coded responses are as follows:

- 1) Ferry terminal area parking
- 2) Off-site park-and-ride lot
- 3) Other parking lot or metered space
- 4) None of the above
- 5) Other Paid Parking
- 9) No Answer/Refused

ACC_PNR = Access Park-and-Ride (Question 13b)

Respondents were asked to report at what park-and-ride they parked, if they did in-fact use a park-and-ride lot. Coded responses were as follows:

- 17) Port Orchard Armory
- 18) Harper Free Evangelical Church
- 20) Olalla Valley Fire Station
- 97) Other
- 99) No Answer/Refused/Don't Know

ACCPUNIT = Access Terminal Parking Unit (Question 13c)

Respondents were asked to report the cost, base on a time period, to park their vehicle at any of the locations listed under ACC_PARK. This variable notes the time basis; the coded responses are as follows:

- 1) Hour
- 2) Day
- 3) Monthly
- 4) Year
- 9) No Answer/Refused/Don't Know

ACCPAID = Access Terminal Parking Amount (Question 13c)

Respondents were asked to report the amount required to park their vehicle at any of the locations listed under ACC_PARK in conjunction with the time period reported under ACPUNIT. In addition to the various amounts reported the follows responses are included in the database:

- .00 = Free
- 999.00 = No Answer/Refused

ACCDLYPD – Access Parking Paid in Daily Format (Refinement of Question 13c)

This is a created variable, based on the response to Question 13c, designed to change each response to a daily paid parking amount in order to provide a valid base of comparison when calculating average parking costs. Parking amounts were modified in the following manner:

- Hourly, Daily and Unknown Unit amounts were assumed to equal the daily amount. With the assumption that most ferry riders noting an hourly unit, provided the amount required for the entire time needed to park; it was also assumed that those passengers who did not report the unit, but did report an amount also provided the amount required for the entire time.
- Monthly units were divided by 21 to approximate a daily amount.
- Yearly units were divided by 260 to approximate a daily amount.
- Passengers who reported parking in Question 13b (response of 1, 2, or 3), but did not provide unit or amount information were assumed to park for free. As it was assumed that most riders who did park but did not pay, would not take the time to write in free or otherwise note that they did not have to pay for parking.
- Passengers who said they parked, provided a parking unit, but did not provide the cost of parking were coded as 999.

EGR_MODE = Egress Mode (Question 13d)

Walk-board respondents were asked to report how they would reach their final destination after exiting the ferry terminal. Available responses are as follows:

- 1) Bicycle
- 2) Walk
- 3) Drive Vehicle
- 4) Ride with Someone
- 5) Bus/Shuttle
- 6) Picked Up
- 9) No Answer/Refused

EGR_BUS = Egress Bus Company (Question 13d)

Respondents were asked which transit agency they were going to use depart from the ferry terminal, if they were departing via bus or shuttle. Coded responses are as follows:

- 1) Kitsap Transit
- 2) King Co. Metro Transit
- 5) Pierce Transit
- 8) Other (Specify)
- 9) No Answer

EGR_PARK – Egress Parking (Question 13e)

Respondents were asked to report where they parked their vehicle, if they were going to pick-up a vehicle after leaving the ferry terminal, but walked or biked off of the ferry. The category of “Other Paid Parking” was created to account for those persons who chose either “none of the above” or did not provide an answer, but did however, provide the amount unit and the cost paid for parking. For this pattern of response, it was assumed that the respondent parked, but the parking space/location did not fit into the provided categories. Coded responses are as follows:

- 1) Ferry terminal area parking
- 2) Off-site park-and-ride lot
- 3) Other parking lot or metered space
- 4) None of the above
- 5) Other Paid Parking
- 9) No Answer/Refused

EGR_PNR = Egress Park-and-Ride (Question 13e)

Respondents were asked to report at what park-and-ride they were going to, if they did in-fact use a park-and-ride lot. Coded responses were as follows:

- 17) Port Orchard Armory
- 18) Harper Free Evangelical Church
- 20) Olalla Valley Fire Station
- 97) Other
- 99) No Answer/Refused/Don’t Know

EGRPUNIT = Egress Terminal Parking Unit (Question 13f)

Respondents were asked to report the cost, base on a time period, to park their vehicle at any of the locations listed under EGR_PARK. This variable notes the time basis; the coded responses are as follows:

- 1) Hour
- 2) Day
- 3) Monthly
- 4) Year
- 9) No Answer/Refused/Don’t Know

EGRPPAID = Egress Terminal Parking Amount (Question 13f)

Respondents were asked to report the amount required to park their vehicle at any of the locations listed under EGR_PARK in conjunction with the time period reported under EGRPUNIT. In addition to the various amounts reported the follows responses are included in the database:

.00 = Free

999.00 = No Answer/Refused

EGRDLYPD – Egress Parking Paid in Daily Format (Refinement of Question 13f)

This is a created variable, based on the response to Question 13c, designed to change each response to a daily paid parking amount in order to provide a valid base of comparison when calculating average parking costs. Parking amounts were modified in the following manner:

- Hourly, Daily and Unknown Unit amounts were assumed to equal the daily amount. With the assumption that most ferry riders noting an hourly unit, provided the amount required for the entire time needed to park; it was also assumed that those passengers who did not report the unit, but did report an amount also provided the amount required for the entire time.
- Monthly units were divided by 21 to approximate a daily amount.
- Yearly units were divided by 260 to approximate a daily amount.
- Passengers who reported parking in Question 13b (response of 1, 2, or 3), but did not provide unit or amount information were assumed to park for free. As it was assumed that most riders who did park but did not pay, would not take the time to write in free or otherwise note that they did not have to pay for parking.
- Passengers who said they parked, provided a parking unit, but did not provide the cost of parking were coded as 999.

AVO = Categorized Vehicle Occupancy (Question 13h)

This variable was created from the individual reported vehicle occupancy responses to form grouped responses that are more conducive to data analysis and display. Created response categories are as follows:

- 1) 1 Person/SOV
- 2) 2 Persons
- 3) 3 Persons
- 4) 4 Persons
- 5) 5+ Persons
- 9) No Answer/Don't Know/Refused

PRILOAD = Priority Loading Status (Question 13i)

Respondents were asked to report if their vehicle received priority loading as a registered ferry car/vanpool, on a bus, or as a special purpose/emergency trip. Coded responses are as follows:

- 1) Yes
- 2) No
- 9) Don't Know/No Answer

INDRVHH = Same Household as Driver (Question 13j)

Vehicle passenger respondents were asked to report if they lived in the same household as the driver of the vehicle. Coded responses are as follows:

- 1) Yes
- 2) No
- 9) Don't Know/No Answer

VEHAVAIL = Categorized Vehicle Availability (Question 14)

This variable was created from the individual responses regarding vehicle availability to form grouped responses that are more conducive to data analysis and display. Created response categories are as follows:

- 1) 1 Vehicle
- 2) 2 Vehicles
- 3) 3 Vehicles
- 4) 4 Vehicles
- 5) 5 or More Vehicles
- 9) No Answer/Don't Know/Refused

HHSIZECAT = Categorized Household Size (Question 15)

This variable was created from the individual responses regarding household size to form grouped responses that are more conducive to data analysis and display. Created response categories are as follows:

- 1) 1 Person
- 2) 2 People
- 3) 3 People
- 4) 4 People
- 5) 5 People
- 6) 6 or More Persons
- 9) No Answer/Don't Know/Refused

HH_DRVRS = Categorized Licensed Drivers per Household (Question 16)

This variable was created from the individual responses regarding the number of licensed drivers to form grouped responses that are more conducive to data analysis and display. Created response categories are as follows:

- 1) 1 Person
- 2) 2 People
- 3) 3 People
- 4) 4 People
- 5) 5 or More Persons
- 9) No Answer/Don't Know/Refused

VEHPDRVR = Vehicles per HH Driver (Question 14 / Question 16)

The number of vehicles was divided by the number of licensed household drivers to provide additional demographic data on ferry riders for comparison to general demographic data.

AGE = Categorized Respondent Age (Question 17)

This variable was created to form grouped responses that are more conducive to data analysis and display. Created response categories are as follows:

- 1) <18
- 2) 18 to 24
- 3) 25 to 34
- 4) 35 to 44
- 5) 45 to 54
- 6) 55 to 64
- 7) 65+
- 9) No Answer/Refused

SEX = Respondents Gender (Question 18)

Respondents were asked to report their gender. Coded responses are as follows:

- 1) Male
- 2) Female
- 9) No Answer/Refused

ALL_OCC = All Occupations Merged (Modified Version of Question 19)

To better tabulate and analyze the multiple responses provided by respondents, this variable was created that merges all of the selected occupational choices by each respondent into a single variable category. Coded responses are as follows:

- 1) Employed
- 2) Student
- 3) Military Personnel
- 4) Employed & Student
- 5) Employed & Military Personnel
- 6) Student & Military Personnel
- 7) Employed, Student & Military Personnel
- 8) None
- 9) No Answer

OCCUP_1 = Occupation 1 (Question 19)

As designed the questionnaire allowed for multiple responses (a single respondent could have checked "Employed" and also checked "Student"), but due to database design each possible answer needs a separate variable for each response. To account for the possibility of multiple responses, there are three OCCUP variables, which were then merged to create the ALL_OCC variable in order to document all the possible combined responses checked by each survey respondent. Possible responses are as follows:

- 1) Employed
- 2) Student
- 3) Military Personnel
- 4) None
- 9) No Answer/Refused

OCCUP_2 = Occupation 2 (Question 19)

As designed the questionnaire allowed for multiple responses (a single respondent could have checked “Employed” and also checked “Student”), but due to database design each possible answer needs a separate variable for each response. To account for the possibility of multiple responses, there are three OCCUP variables , which were then merged to create the ALL_OCC variable in order to document all the possible combined responses checked by each survey respondent. Possible responses are as follows:

- 1) Employed
- 2) Student
- 3) Military Personnel
- 4) None
- 9) No Answer/Refused

OCCUP_3 = Occupation 3 (Question 19)

As designed the questionnaire allowed for multiple responses (a single respondent could have checked “Employed” and also checked “Student”), but due to database design each possible answer needs a separate variable for each response. To account for the possibility of multiple responses, there are three OCCUP variables , which were then merged to create the ALL_OCC variable in order to document all the possible combined responses checked by each survey respondent. Possible responses are as follows:

- 1) Employed
- 2) Student
- 3) Military Personnel
- 4) None
- 9) No Answer/Refused

ADA = ADA Eligible (Question 20)

Respondents were asked to report if they were eligible for transportation services covered by the Americans with Disabilities Act. Allowed responses are a follows:

- 1) Yes
- 2) No
- 9) No Answer/Refused

REG_WIN = Registered for Drawing

Coding to administer the prize drawing offered to those who participated. Coded responses are as follows:

- 1) Yes
- 2) No

HOME_ADR = Home Address - Drawing

Administrative field for prize drawing.

HOME_APT = Apartment Number - Drawing

Administrative field for prize drawing.

HEMOCITY = Home City - Drawing

Administrative field for prize drawing.

HOME_ST = Home State - Drawing
Administrative field for prize drawing

HOME_ZIP = Zip Code - Drawing
Administrative field for prize drawing

HOME_GEO = Household Geo-coding Status - Drawing
Secondary check for accurate geo-coding of home origin/destination, if respondent reported they were either going to or coming from home. Provides information pertaining to the level of detail available for origin/destination mapping. Four responses are allowed for this variable:

- O = Outside TAZ coverage area
- M = Matched and within TAZ coverage area
- U = Unmatched
- C = Canada TAZ Coverage

HOME_X = Household X Coordinate - Drawing
Provides an X-coordinate for listed home address, based on geo-coding process. Used as a secondary check for accurate geo-coding of home origin/destination.

HOME_Y = Household Y Coordinate - Drawing
Provides a Y-coordinate for listed home address, based on geo-coding process. Used as a secondary check for accurate geo-coding of home origin/destination.

HOME_TAZ = Household TAZ (Traffic Analysis Zone) - Drawing
Provides a coded TAZ based on the home address - also used as a secondary check of geo-coding accuracy.

DESTCITY = Destination City (Question 2)
Write in response, requesting city/area of final destination.

DEST_ZIP = Destination City/Area Zip Code (Question 2)
Write in response, requesting zip-code of final destination.

DESTNAME = Destination Place Name (Question 2)
Write in response, used as a back-up if City information was not provided or destination was a rural area.

DEST_ADR = Destination Street Address (Question 2)
Write in response, requesting street address information for geo-coding purposes.

DEST_XST = Destination Cross Streets (Question 2)
Write in response, used as a back-up, if an exact street address was not given or unavailable, for geo-coding purposes.

DEST_GEO = Destination Geocoding Status (Question 2)

Provides information pertaining to the level of detail available for destination mapping. Four responses are allowed for this variable:

- O = Outside TAZ coverage area
- M = Matched and within TAZ coverage area
- U = Unmatched
- C = Canada TAZ Coverage

DEST_X = Destination X Coordinate (Question 2)

Provides an X-coordinate based on geo-coding process.

DEST_Y = Destination Y Coordinate (Question 2)

Provides a Y-coordinate based on geo-coding process.

DEST_GAD = Destination Geo-Coded Address Point (Question 2)

Geocoded address point, if different than address or location provided.

DEST_ZON = Destination Geo-Coded Zone (Question 2)

Zone centroid location by zip-code.

DESTGZIP = Destination Geo-Coded Zip Code (Question 2)

Lists the zip-code for the destination found through the geo-coding process, if different than address/location provided.

DESTGCTY = Destination Geo-Coded City (Question 2)

Lists the destination city found through the geo-coding process, if different than address/location provided.

DESTCFIP = Destination County FIP's Code (Question 2)

Lists the County FIP's code for the destination city/area.

DEST_GQC = Destination Geo-Coding Quality Control Flag

Lists the degree of effort required to accurately geo-coding the destination information provided by the respondent. Listing is as follows:

- 1) City and zip-code provided match geo-coded city and zip.
- 2) Zip-Code provided matches geocoded zip-code.
- 3) Geo-coded point manually verified.
- 4) Location geo-coded based on city and zip-code matching look-up table.
- 5) Manually matched geo-code, based on similar place names/addresses.
- 6) City and zip-code listed by respondent matches one found in look-up table.
- 7) Zip-code provided by respondent matches one found in look-up table.
- 8) City provided by respondent matches a city from the look-up table.
- 9) City and zip-coded provided for Seattle, match city-zip table.
- 10) Manually matched record, based on city provided.

ORIGCITY = Origin City (Question 4)

Write in response, requesting city/area where the respondent just came from.

ORIG_ZIP = Origin Zip Code (Question 4)

Write in response, requesting zip-code from where they came from before reaching the ferry.

ORIGNAME = Origin Place Name (Question 4)

Write in response, used as a back-up if City information was not provided or origin was a rural area.

ORIG_ADR = Origin Street Address (Question 4)

Write in response, requesting street address information for geo-coding purposes.

ORIG_XST = Origin Cross Streets (Question 4)

Write in response, used as a back-up, if an exact street address was not given or unavailable, for geo-coding purposes.

ORIG_GEO = Origin Geocoding Status (Question 4)

Provides information pertaining to the level of detail available for origin mapping. Four responses are allowed for this variable:

O = Outside TAZ coverage area

M = Matched and within TAZ coverage area

U = Unmatched

C = Canada TAZ Coverage

ORIG_X = Origin X Coordinate (Question 4)

Provides an X-coordinate based on geo-coding process.

ORIG_Y = Origin Y Coordinate (Question 4)

Provides a Y-coordinate based on geo-coding process.

ORIG_GAD = Origin Geo-Coded Address Point (Question 4)

Geocoded address point, if different than address or location provided.

ORIG_ZON = Origin Geo-Coded Zone (Question 4)

Zone centroid location by zip-code.

ORIGGZIP = Origin Geo-Coded Zip Code (Question 4)

Lists the zip-code for the origin found through the geo-coding process, if different than address/location provided.

ORIGGCTY = Origin Geo-Coded City (Question 4)

Lists the origin city found through the geo-coding process, if different than address/location provided.

ORIGCFIP = Origin County FIP's Code (Question 4)

Lists the County FIP's code for the origin city/area.

ORIG_GQC = Origin Geo-Coding Quality Control Flag (Question 4)

Lists the degree of effort required to accurately geo-coding the origin information provided by the respondent. Listing is as follows:

- 1) City and zip-code provided match geo-coded city and zip.
- 2) Zip-Code provided matches geocoded zip-code.
- 3) Geo-coded point manually verified.
- 4) Location geo-coded based on city and zip-code matching look-up table.
- 5) Manually matched geo-code, based on similar place names/addresses.
- 6) City and zip-code listed by respondent matches one found in look-up table.
- 7) Zip-code provided by respondent matches one found in look-up table.
- 8) City provided by respondent matches a city from the look-up table.
- 9) City and zip-code provided for Seattle, match city-zip table.
- 10) Manually matched record, based on city provided.

AVO_RAW = Vehicle Occupancy (Question 13h)

Variable reports the number of persons (including the respondent) traveling with the respondent, except for those traveling via bus or shuttle. A value label of 99 was used for those respondents who chose not to answer the question or did not know the number of persons traveling in the vehicle.

VEH_RAW = Number of Vehicles Available in Household (Question 14)

Respondents were asked the number of working motor vehicles available for use by their household. In addition to the number values given by respondents, a value of 99 was assigned for those who did not answer the question.

HHSZ_RAW = Household Size (Question 15)

Respondents were asked to report the number of persons living in their household. In addition to the number values given by respondents, a value of 99 was assigned for those who did not answer the question.

LICN_RAW = Licensed Drivers (Question 16)

Respondents were asked to report the number of licensed drivers living in their household. In addition to the number values given by respondents, a value of 99 was assigned for those who did not answer the question.

AGE_RAW = Respondents Age (Question 17)

Respondents were asked to report their age. In addition to the number values given by respondents, a value of 99 was assigned for those who did not answer the question.